Canada-Manitoba

# MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

## Annual Report

## 1985-1986

July, 1986

MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

IMPLEMENTATION COMMITTEE

1901 Victoria Avenue
Regina, Saskatchewan
S4P 3R4

The Honourable Tom McMillan
Minister
Department of the Environment
Ottawa, Ontario
K1A 0H3

The Honourable Leonard Harapiak
Minister
Department of Natural Resources
Winnipeg, Manitoba
R3C 0V8

Dear Ministers:

I am pleased to present the fourth Annual Report of the Implementation Committee for the administration of the Manitoba Flood Protection Projects Agreement which was amended on May 22, 1985 to provide for flood protection works at Ste. Rose du Lac and the Souris Water Treatment Plant. This report covers the work undertaken during the period April 1, 1985 to March 31, 1986.

Progress in the fourth year of the agreement was significant with the dyke upgrading being completed at Brunkild and Morris and the majority of works completed at St. Jean, Letellier and Rosenort.

During the reporting period total shareable expenditures were $1,074,699.44. Of this amount 45 percent or $483,614.74 was Canada's share and 55 percent or $591,084.70 was Manitoba's share.

Yours truly,

R. A. Halliday
Chairman

CANADA-MANITOBA

# MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

# ANNUAL REPORT

# FOR

# THE PERIOD

# APRIL 1, 1985 TO MARCH 31, 1986

Environment Canada
Inland Waters Directorate
Western and Northern Region
1901 Victoria Avenue
Regina, Saskatchewan
S4P 3R4

Province of Manitoba
Department of Natural Resources
Water Resources Branch
1577 Dublin Avenue
Winnipeg, Manitoba
R3E 3J5

July, 1986

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## MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

On March 10, 1983 the Government of Canada and Manitoba signed "An Agreement Respecting the Upgrading of Ring Dykes in Certain Communities in the Red River Valley". This Agreement provides for the upgrading of the existing dyking systems of eight communities in the Red River Valley to provide flood protection to the one percent flood level. This agreement was amended on May 22, 1985 to extend the time and provide for additional funding of $1.6 million to include flood protection works for Ste. Rose du Lac and the Souris Water Treatment Plant. The termination date for the new Canada-Manitoba Flood Protection Projects Agreement is March 31, 1989.

### 1. Introduction

The fourth annual report reviews work activities and programs under the Canada-Manitoba Flood Protection Projects Agreement during the period from April 1, 1985 to March 31, 1986.

The Agreement provides up to $6.1 million to improve the existing ring dykes at Emerson, Letellier, Dominion City, St. Jean Baptiste, Morris, Rosenort, Brunkild, St. Adolphe, Ste. Rose du Lac and at the Souris Water Treatment Plant to protect against a one percent flood. The cost of the works to be undertaken under this agreement are to be shared 45 percent by Canada and 55 percent by Manitoba. Manitoba has instituted agreements with the municipalities in which the eight communities in the Red River Valley are located requiring a contribution of five percent of the capital costs to upgrade the dyking systems from the 1950 flood level to the one percent flood level and 25 percent of the annual maintenance costs. Thus, in those

instances where portions of the dyking systems are not up to the 1950 level the capital cost of such portions will be shared 55 percent by Manitoba and 45 percent by Canada. In lieu of 25 percent of the annual maintenance costs the communities will be responsible for grass mowing as well as a fixed annual payment to the Province for pump replacement. Manitoba has signed agreements with the Turtle River Conservation District for the works at the Village of Ste. Rose du Lac and with the Town of Souris for contributions of 5 percent of the capital works and 25 percent of the annual maintenance costs.

The communities are shown on the location map in Appendix A. Location plans for the dyking systems are shown in Appendix B.

## 2. Organization

Under the terms of the Ring Dyke Upgrading Agreement an Implementation Committee was established consisting of one member appointed by the Minister of the Environment for Canada and one member appointed by the Minister of Natural Resources for Manitoba. The members for 1985-86 were:

| Canada | Manitoba |
|---|---|
| Mr. R. A. Halliday<br>Regional Director<br>Inland Waters Directorate<br>Environment Canada | Mr. N. Mudry<br>Chief of Water Management<br>Water Resources Branch<br>Department of Natural Resources |

Mr. Halliday acted as Chairman for the 1985-86 year and Mr. G. Felton of Inland Waters Directorate, Environment Canada served as Secretary.

The Implementation Committee met on June 13, 1985, September 18, 1985 and December 4, 1985.

3. Progress

All ten communities included in this agreement are covered by agreements between the municipalities in which they are located and the Province of Manitoba to cost-share in the upgrading of the dyking systems. An additional agreement with the R.M. of Ritchot for St. Adolphe will be required as the municipality has requested the dyking system north of the community to be extended to provide protection to additional land. The Implementation Committee has agreed to this extension provided that the incremental costs are not included under the Agreement. The R.M. of Ritchot has agreed to be responsible for these incremental costs but have to date not completed an agreement with the owner of the additional land which would be protected.

The following is the progress report on all the communities for the 1985-86 fiscal year.

Emerson - The existing north-west section of the dyke from the CN Railway to PR No. 200 at Emerson was upgraded under a day-labour contract. Emergency communications equipment was purchased. The U.S. Corps of Engineers is attempting to obtain authorization for a joint project providing for dyke protection for the Village of Noyes, Minnesota along with a dyke along the International Boundary which would be incorporated into the Emerson dyking system thereby giving full flood protection to Emerson insofar as flooding from the south side is concerned. The International Boundary dyke on the Minnesota side will be constructed by the Corps but cost-shared under the Canada-Manitoba Flood Protection Projects Agreement.

Expenditures for the year were $114,675.92.

Letellier - The required right-of-way was purchased. The existing dykes were raised and the new dyke constructed along PR No. 201 south of the

community. Culverts were cored through PTH No. 75, PR No. 201 and the C.N.R. for outlets and to facilitate drainage. A reinforced concrete gravity outlet control was constructed through south of PR No. 201. The pump pit on the south side of the community was moved to the south side of PR No. 201 and the pump house was constructed. The dyke was gravelled where necessary. Emergency communications equipment was purchased. Standby pumping and clean up remain to be done and will be undertaken next year.

Expenditures for the year were $335,539.53.

St. Jean Baptiste - The existing dykes were raised and a new dyke consisting of 74,000 cu. metres of earthwork was constructed. A 150 metre steel sheet piling and earthfill dyke was constructed along the C.N.R. south of PR No. 246. The waterline was relocated at Railway Street and Centre Avenue. The purchase of the right-of-way was completed. Emergency communications equipment was purchased.

Standby pumping, relocation of the sewer line and some additional dyking remain to be done. This will be completed in the following year.

Expenditures for the year were $287,960.25.

Dominion City - No construction or design work was undertaken. Emergency communications equipment was purchased.

Expenditures were $19,029.59.

Morris - The upgrading of the dykes were completed and seeded. The bed for the trees for erosion control was prepared. Emergency communications equipment was purchased.

Stanby pumping, erosion control works and storage building will be completed next year.

Expenditures for the year were $48,808.05.

Rosenort - The existing dykes were raised and the west dyke south of PR No. 205 was relocated. A culvert was installed through PR No. 205. One pump required for upgrading the main pumping station was purchased and installed. Emergency communications equipment was purchased.

Standby pumping, seeding of the dykes and erosion control works will be completed next year.

Expenditures were $178,840.29.

Brunkild - All the new dyking and dyke upgrading work has been completed. Internal drainage was completed. The purchase and installation of the two pumps for the pumping station has been completed. The pump house was constructed. Emergency communications equipment was purchased. Erosion control works will be undertaken in 1986-87.

Expenditures were $59,928.85.

St. Adolphe - Raising and upgrading of the existing dykes on the east and southeast side of the Village were completed. The only remaining work is the construction of the north dyke, and tree planting for erosion control. As soon as agreement is reached with the R.M. of Ritchot on the location of the north dyke construction will commence.

Expenditures were $27,271.96.

Ste. Rose du Lac - Design of the proposed flood protection works at Ste. Rose du Lac was initiated during the year under review. Acquisition of land for the project was initiated.

Expenditures were $2,645.00.

Souris Water Treatment Plant Dyke - No construction or design work was undertaken over the past year.

Total Expenditures - Expenditures for the 1985-86 fiscal year totalled $1,074,699.44. Table 1 indicates expenditures under the Agreement for 1982-1986.

TABLE 1

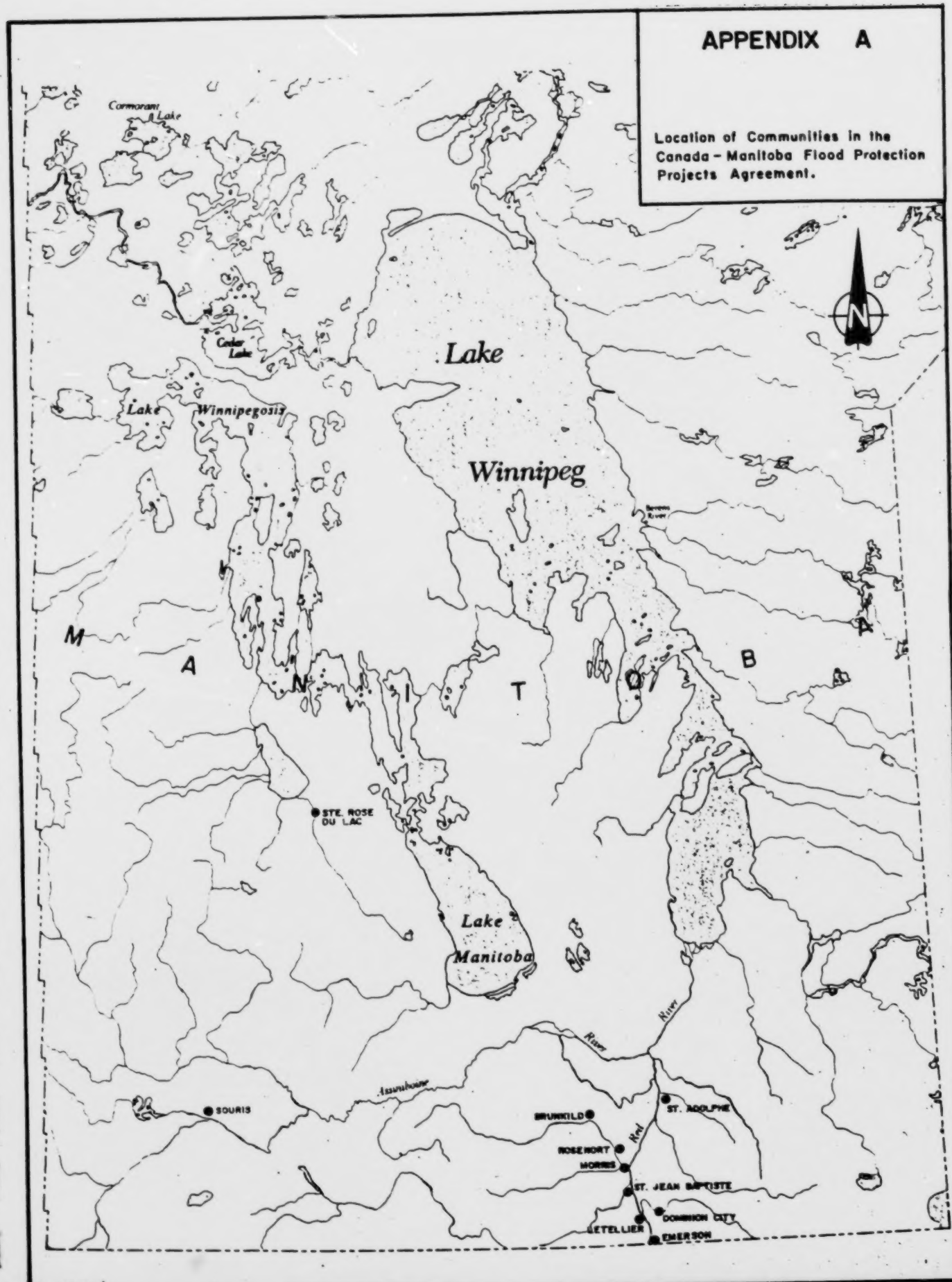
CANADA-MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT
EXPENDITURES FOR 1982-86

| Community | 1982/83* | 1983/84 | 1984/85 | 1985/86 | Accumulative Total |
|---|---|---|---|---|---|
| Emerson | - | $ 3,834.76 | $ 7,356.01 | $ 114,675.92 | $ 125,866.69 |
| Letellier | - | 7,367.42 | 65,599.26 | 335,539.53 | 408,506.21 |
| Dominion City | - | - | - | 19,029.59 | 19,029.59 |
| St. Jean Baptiste | $198,128.74 | 369.20 | 48,473.89 | 287,960.25 | 534,932.08 |
| Morris | 131,004.39 | 1,045.11 | 150,186.27 | 48,808.05 | 331,043.82 |
| Rosenort | 10,209.81 | 4,369.11 | 23,293.09 | 178,840.29 | 216,712.30 |
| Brunkild | - | 177,837.07 | 259,984.61 | 59,928.85 | 497,750.53 |
| St. Adolphe | - | 136,140.54 | 132,563.68 | 27,271.96 | 295,976.18 |
| Ste. Rose du Lac | - | - | - | 2,645.00 | 2,645.00 |
| Souris | - | - | - | - | - |
| TOTAL | $339,342.84 | $330,963.21 | $687,456.81 | $1,074,699.44 | $2,432,462.30 |

*During 1982-83 there were no funds expended because of the late signing of the agreement. The expenditures indicated are for those retroactive costs incurred by the Province prior to the agreement signing as allowed under clause 4(5) of the Agreement.

# APPENDIX A

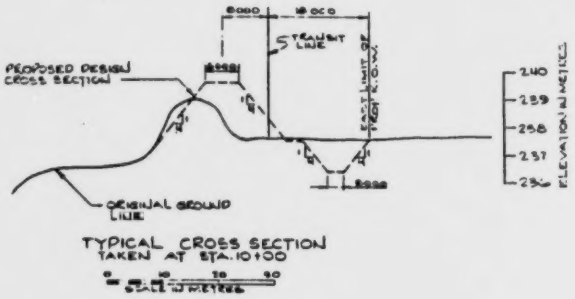
Location of Communities in the Canada - Manitoba Flood Protection Projects Agreement.




FSB 96 05 14

# APPENDIX B

## LOCATION PLANS OF THE
## TEN MANITOBA FLOOD PROTECTION PROJECTS

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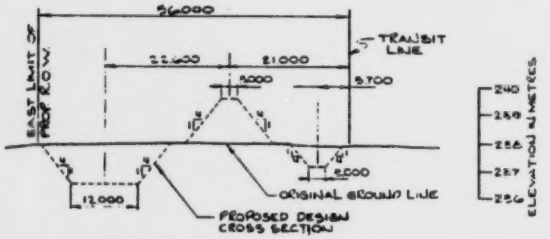
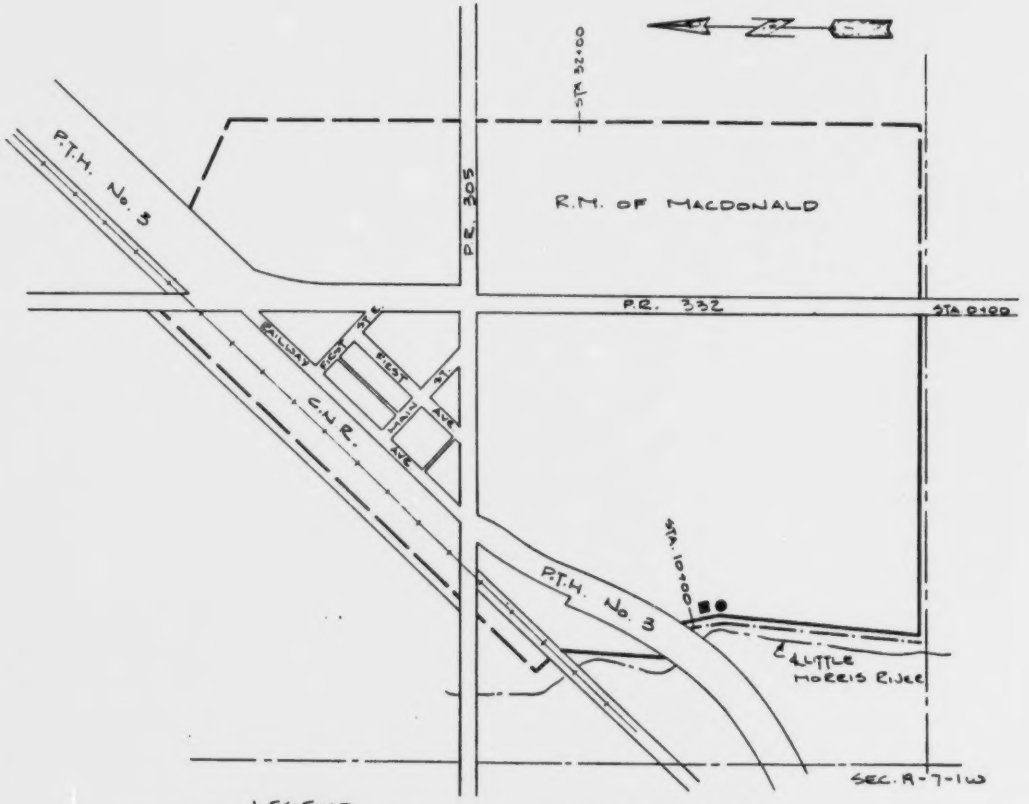
SCALE IN METRES




TYPICAL CROSS SECTION
TAKEN AT STA. 32+00
(LOOKING DOWNSTREAM)

SCALE IN METRES




LEGEND

- LOCATION OF PROPOSED PERMANENT DYKING SYSTEM.
- PROPOSED PUMPING STATION.
- PROPOSED GRAVITY OUTLET CHAMBER.
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.
- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.

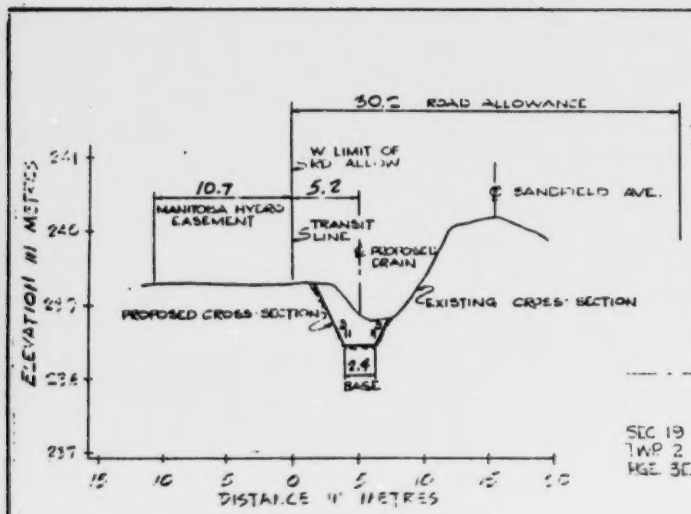
CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

PREPARED | DESIGN C.E.W. | CHECKED | SUBMITTED | D. Brindley

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF BRUNKILD

SCALE | DATE 81 11 27 | SHEET | FILE NO.

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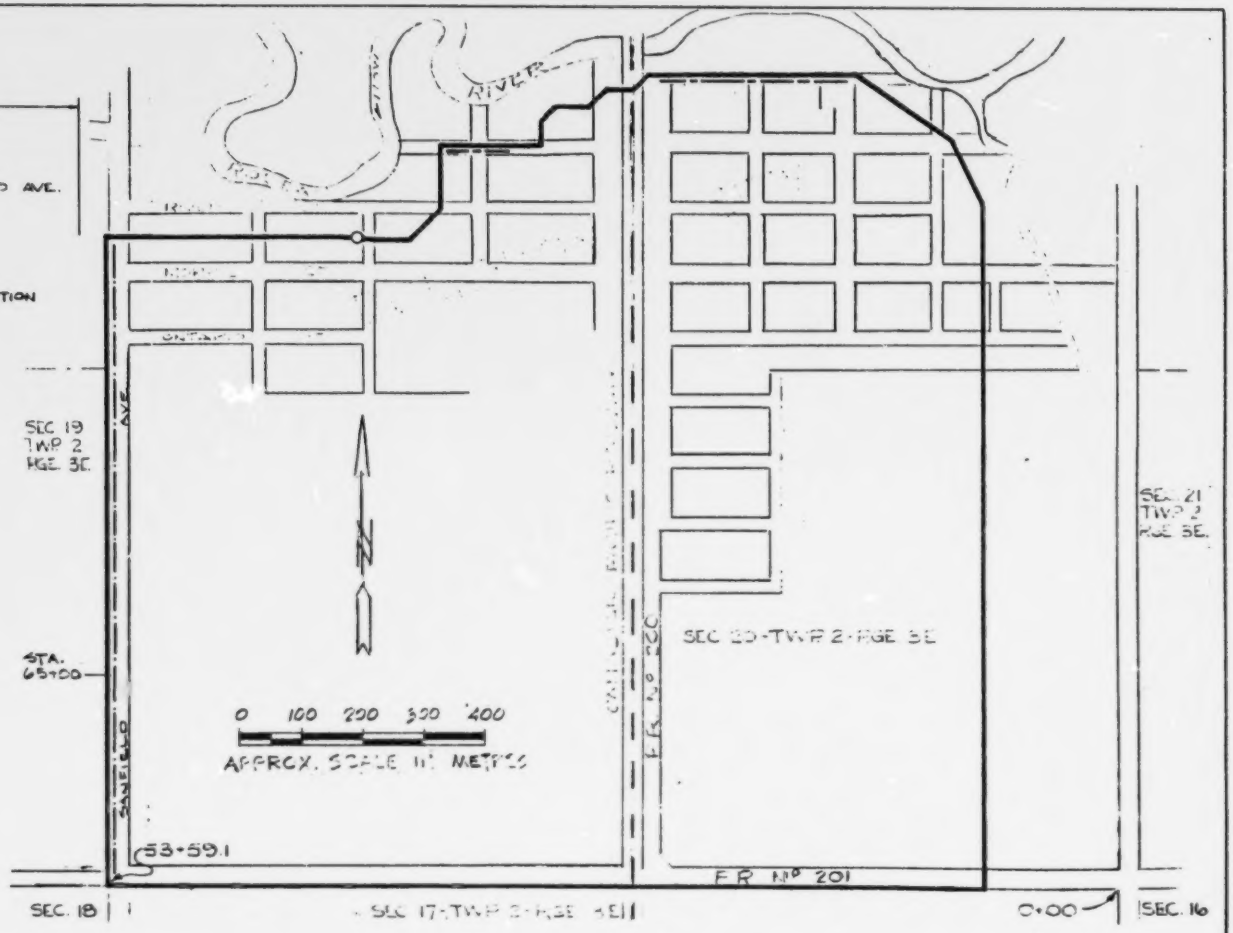


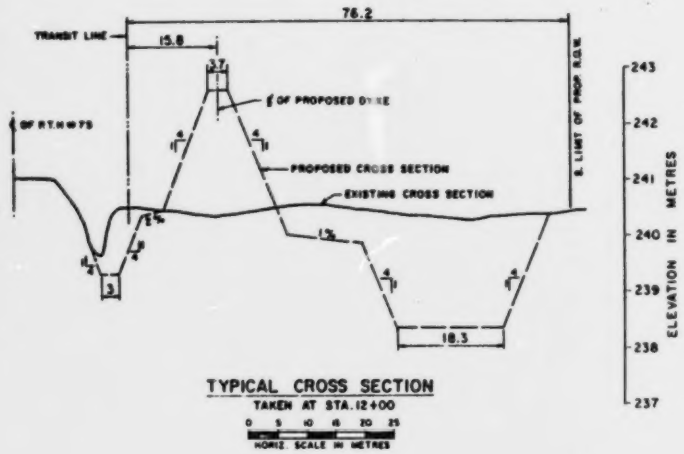

## LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.
- EXISTING DYKE REQUIRING NO IMPROVEMENTS
- O EXISTING GRAVITY OUTLET CHAMBER.
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.
- LOCATION OF PROPOSED PAVED SURFACE ROADWAY.

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF DOMINION CITY

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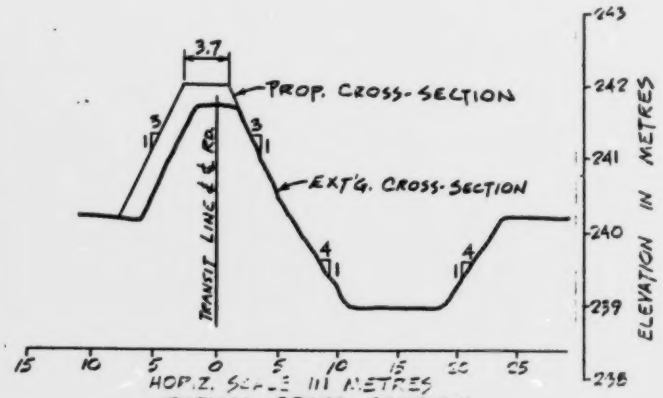
HORIZ. SCALE IN METRES

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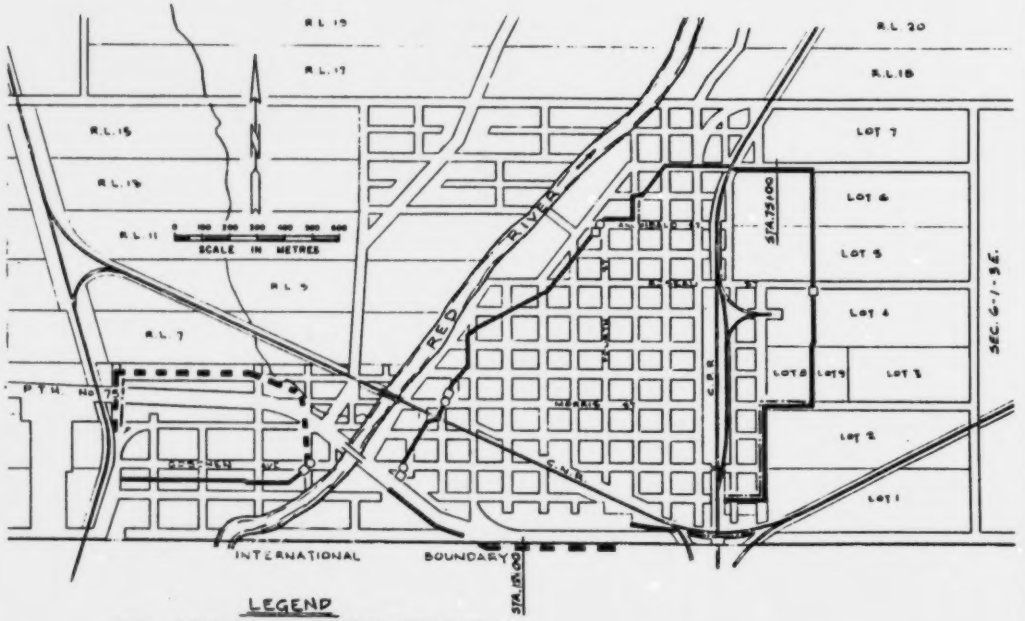


LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.
- LOCATION OF PROPOSED NEW DYKES
- EXISTING PUMPING STATION
- EXISTING GRAVITY OUTLET CHAMBER.
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

PREPARED | DRAWN F.R. | CHECKED | SUBMITTED | DIRECTOR

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR TOWN OF EMERSON

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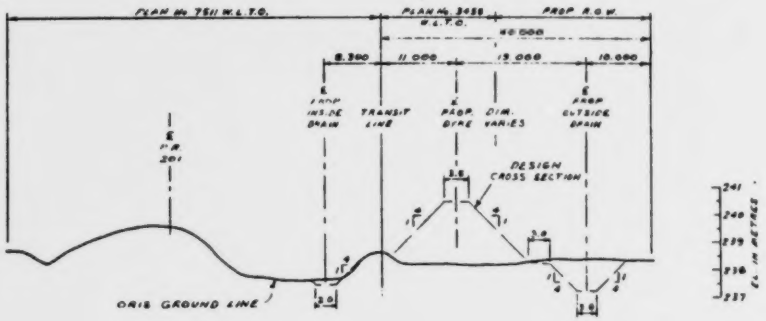


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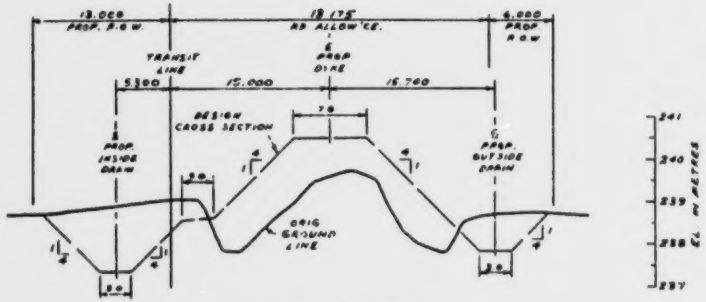
HOR. DISTANCE IN METRES

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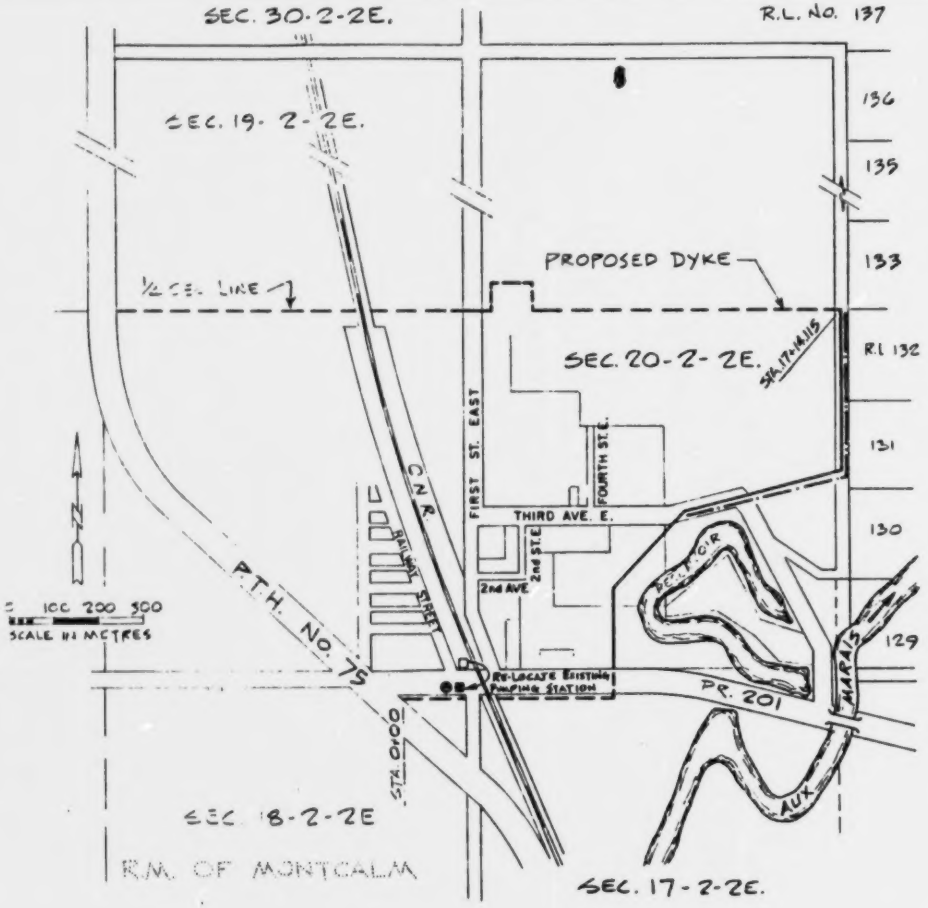


## LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.
- LOCATION OF PROPOSED NEW DYKING.
- EXISTING PUMPING STATION.
- RE-LOCATED PUMPING STATION.
- PROPOSED GRAVITY OUTLET CHAMBER
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

| PREPARED | DRAWN / CHECKED | SUBMITTED | APPROVED |
|---|---|---|---|
| | ER | | D. Chuang |

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF LETELLIER

| SCALE | DATE | SHEET | FILE NO. |
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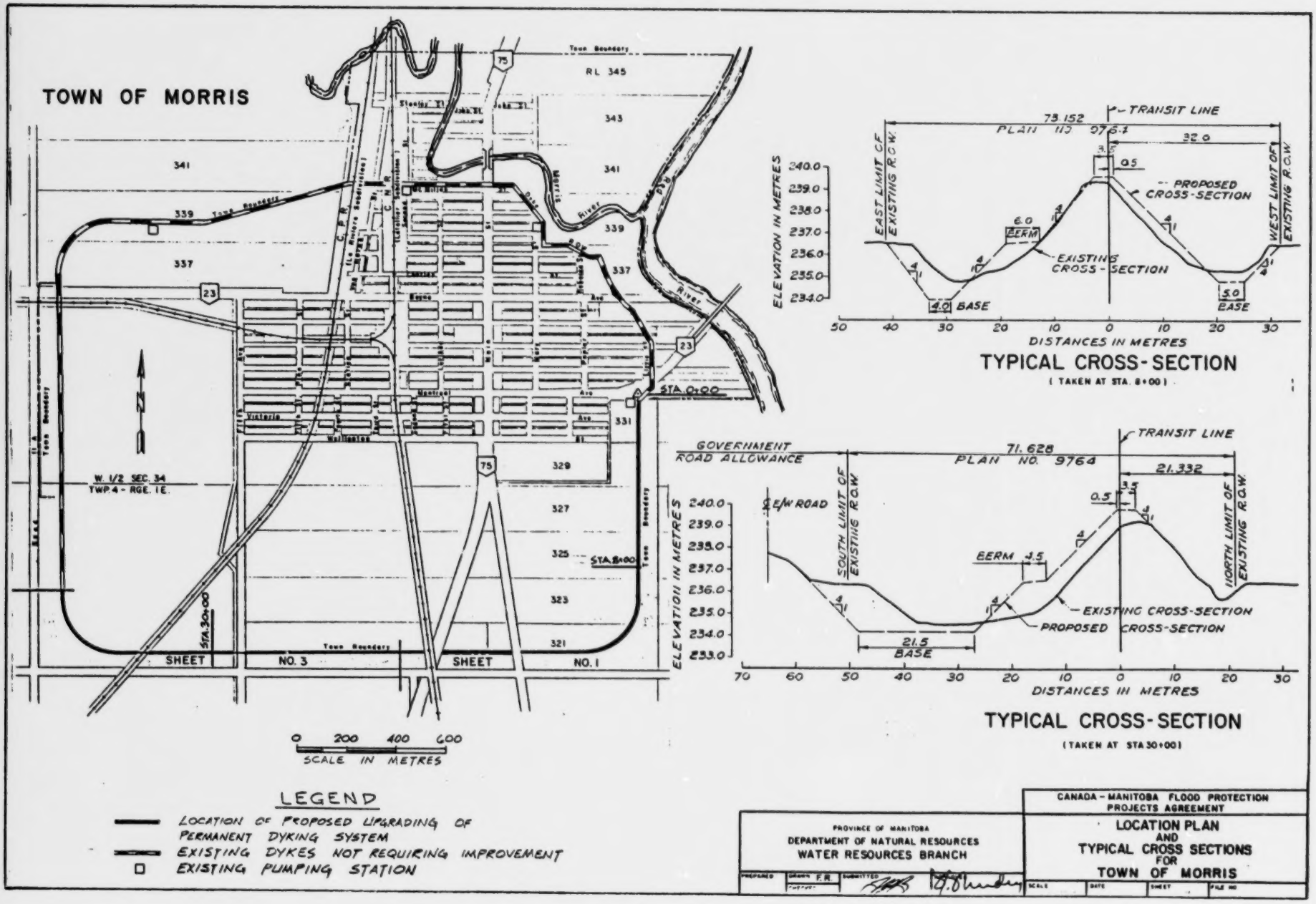
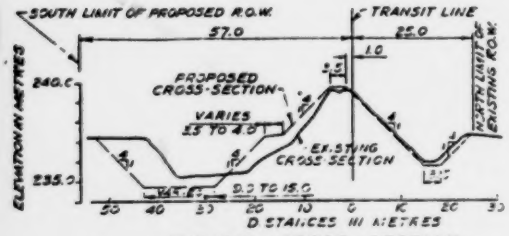
| AS SHOWN | | | |


TOWN OF MORRIS
RL 345
343
341
339
337
331
329
327
325
323
321
Town Boundary
C.P.R.
Assiniboine River
Stanley St.
John St.
Mountain St.
Railway St.
Main St.
Broadway
Victoria Ave
Montcalm Ave
Washington St.
Montreal Ave
Ottawa Ave
Quebec Ave
Edmonton Ave
Winnipeg Ave
Regina Ave
Saskatoon Ave
Calgary Ave
Vancouver Ave
Toronto Ave
Ontario Ave
Prince Edward Ave
Dufferin Ave
Pembina Ave
Lorne Ave
Elm Creek Boundary
Elm Creek Boundary
75
23
N
W. 1/2 SEC. 34
TWP. 4 - RGE. 1 E.
STA. 0+00
STA. 8+00
STA. 30+00
SHEET NO. 3
SHEET NO. 1
0 200 400 600
SCALE IN METRES
LEGEND
LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM
EXISTING DYKES NOT REQUIRING IMPROVEMENT
EXISTING PUMPING STATION
TRANSIT LINE
73.152
PLAN NO. 9764
32.0
EAST LIMIT OF EXISTING R.O.W.
WEST LIMIT OF EXISTING R.O.W.
PROPOSED CROSS-SECTION
EXISTING CROSS-SECTION
BERM
BASE
ELEVATION IN METRES
240.0
239.0
238.0
237.0
236.0
235.0
234.0
DISTANCES IN METRES
TYPICAL CROSS-SECTION
( TAKEN AT STA. 8+00 )
GOVERNMENT ROAD ALLOWANCE
71.628
PLAN NO. 9764
TRANSIT LINE
21.332
E/W ROAD
SOUTH LIMIT OF EXISTING R.O.W.
NORTH LIMIT OF EXISTING R.O.W.
BERM
EXISTING CROSS-SECTION
PROPOSED CROSS-SECTION
BASE
ELEVATION IN METRES
240.0
239.0
238.0
237.0
236.0
235.0
234.0
233.0
DISTANCES IN METRES
TYPICAL CROSS-SECTION
(TAKEN AT STA 30+00)
CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT
PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH
LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR TOWN OF MORRIS
PREPARED
DRAWN F.R.
SUBMITTED
SCALE
DATE
SHEET
FILE NO.




TYPICAL CROSS-SECTION

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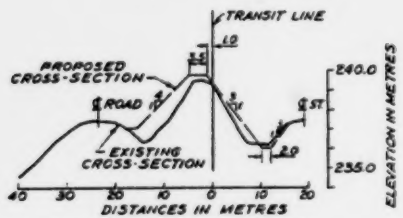


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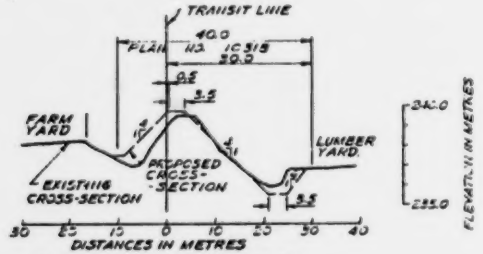


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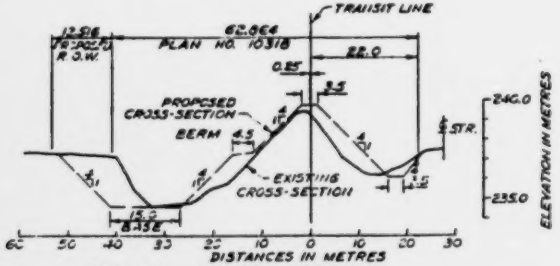


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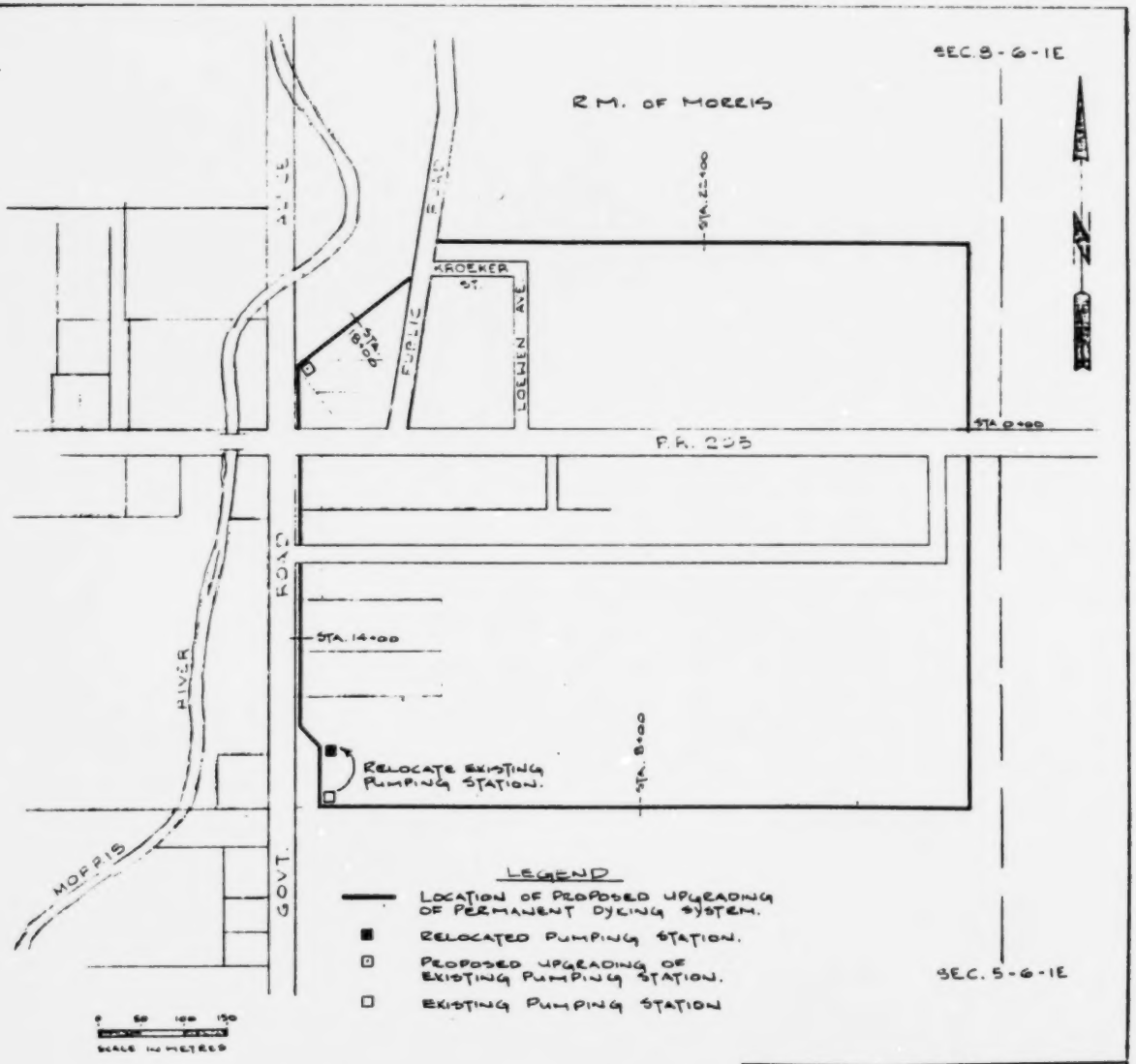
TAKEN AT STA. 22+00

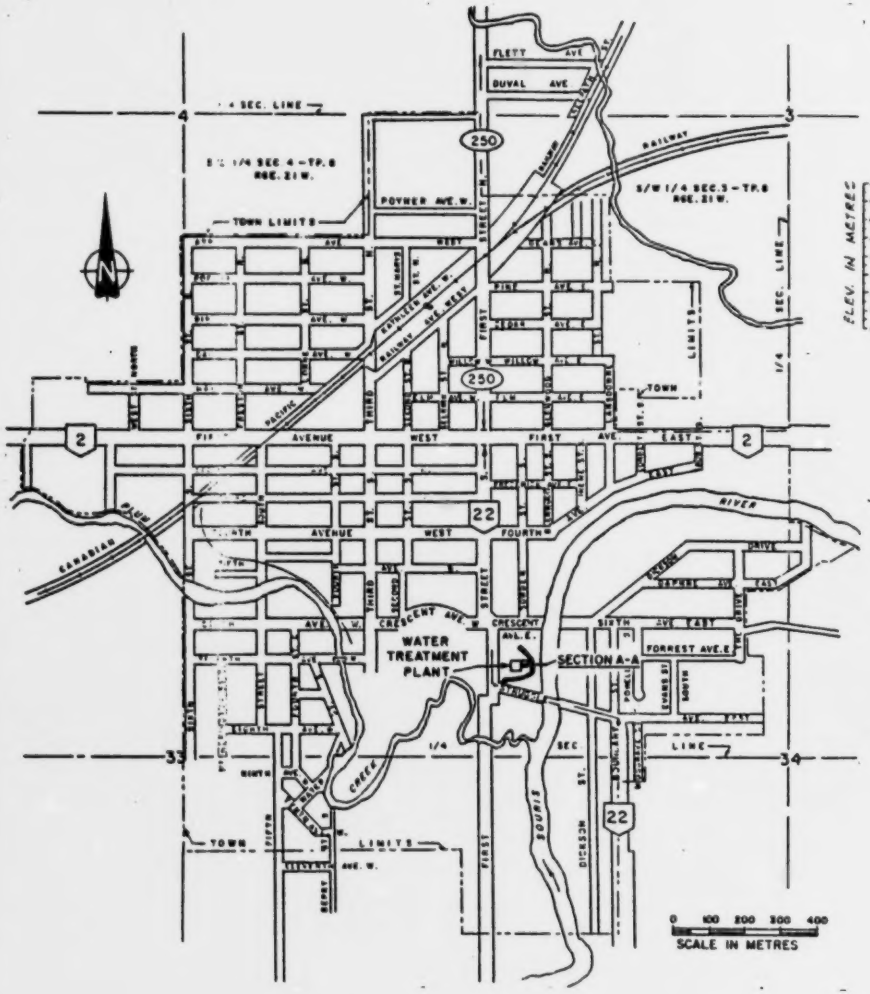


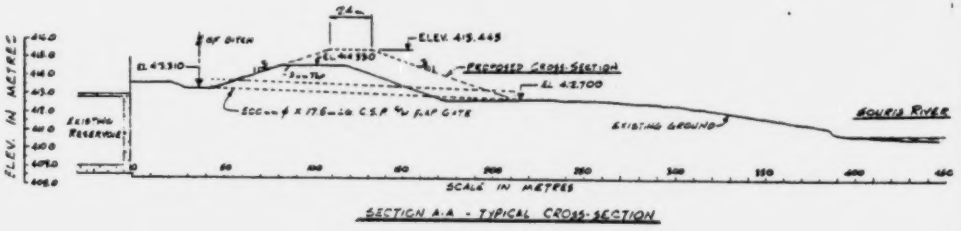

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF ROSENORT

PREPARED | DRAWN C.E.W. | SUBMITTED | CHECKED | SCALE | DATE 85 11 27 | SHEET | FILE NO.




SECTION A-A - TYPICAL CROSS-SECTION

## LEGEND

——— - LOCATION OF PROPOSED UPGRADING OF EXISTING DYKE

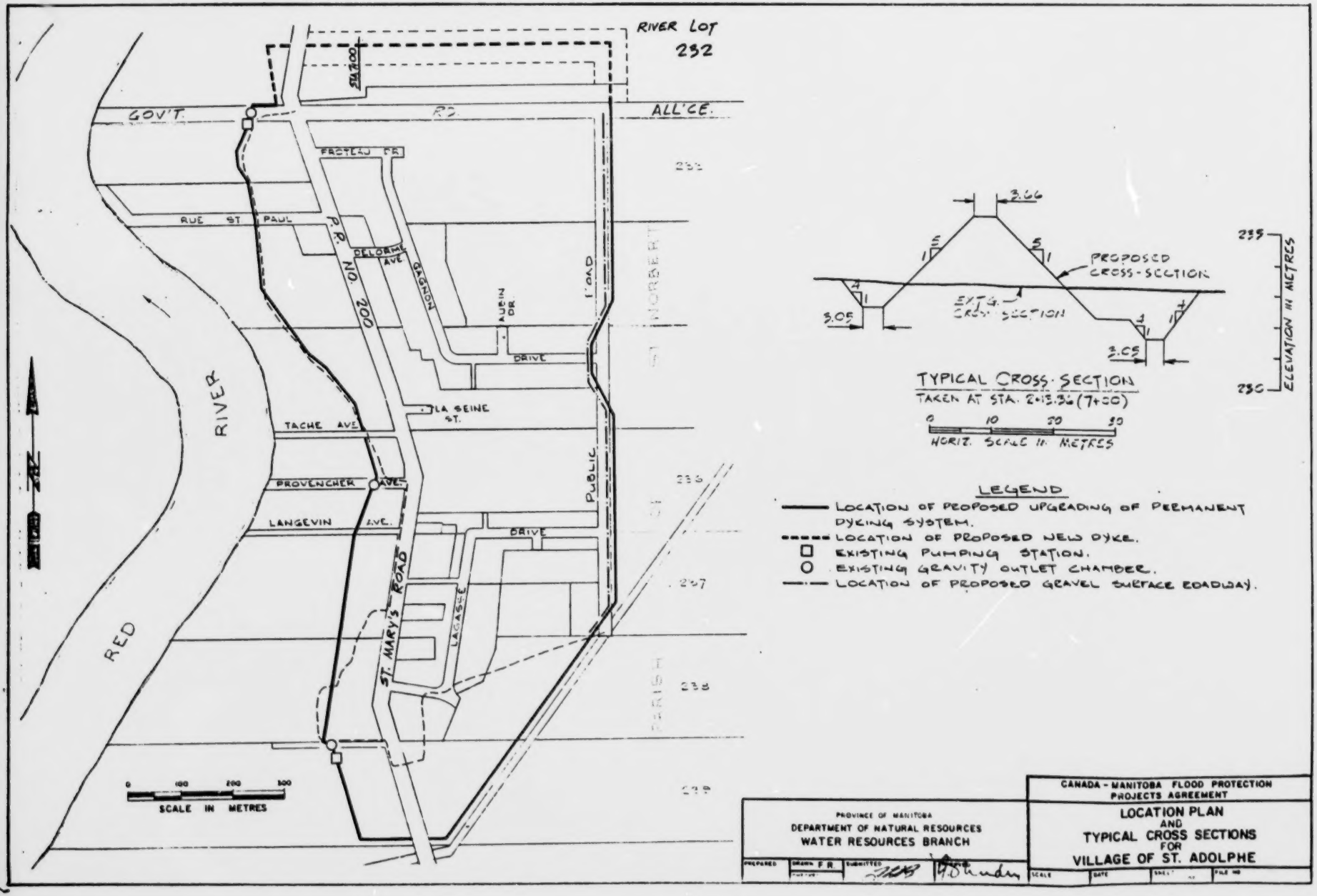
PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR TOWN OF SOURIS

PREPARED | DRAWN P.R. | CHECKED | SUBMITTED | APPROVED

SCALE | DATE 83 10 19 | SHEET 1 of 1 | FILE NO




## LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.
- LOCATION OF PROPOSED NEW DYKE.
- EXISTING PUMPING STATION.
- EXISTING GRAVITY OUTLET CHAMBER.
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.

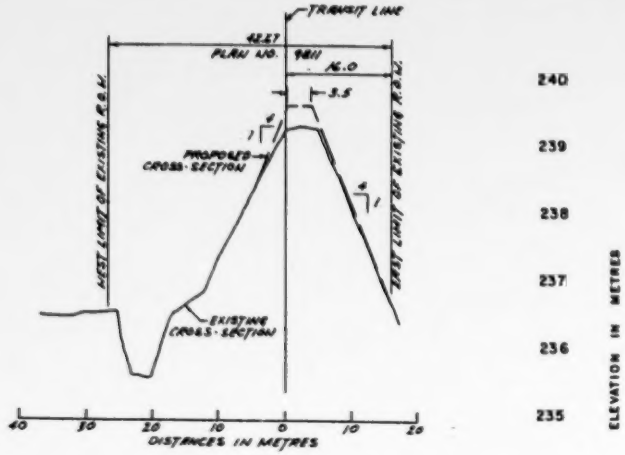
PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

PREPARED | DRAWN F.R. | SUBMITTED | APPROVED

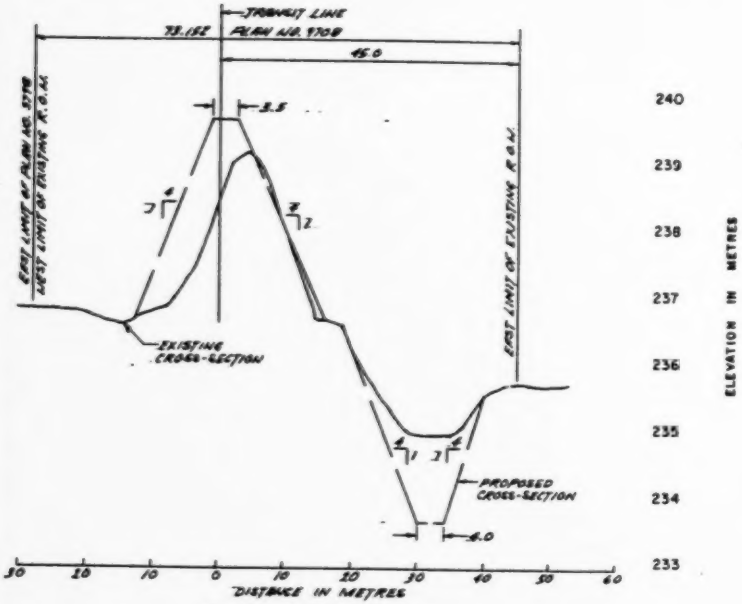
CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF ST. ADOLPHE

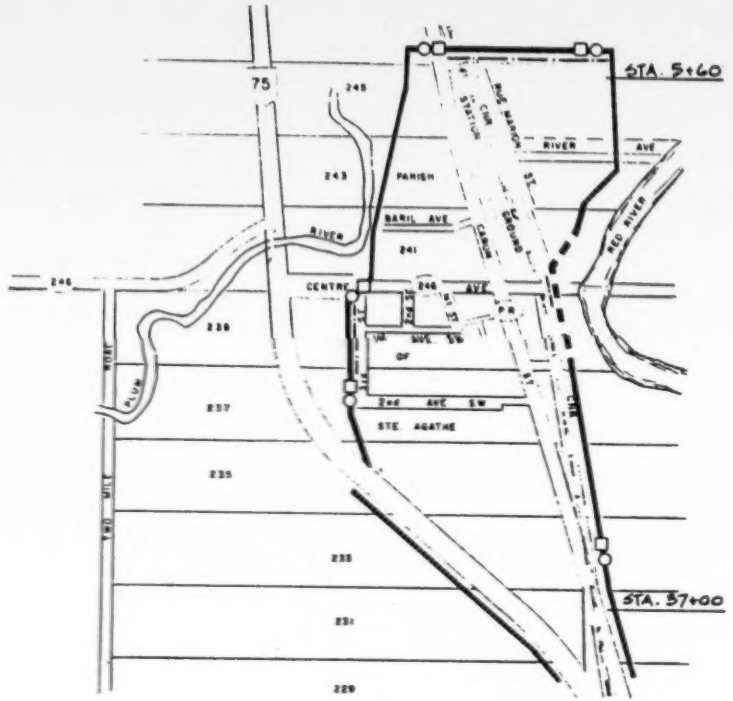
SCALE | DATE | SHEET | FILE NO




TYPICAL CROSS-SECTION
TAKEN AT STA. 5+60




TYPICAL CROSS-SECTION
TAKEN AT STA. 37+00




## LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKE SYSTEM.
- LOCATION OF PROPOSED NEW DYKE
- EXISTING PUMPING STATION
- EXISTING GRAVITY OUTLET CHAMBER
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

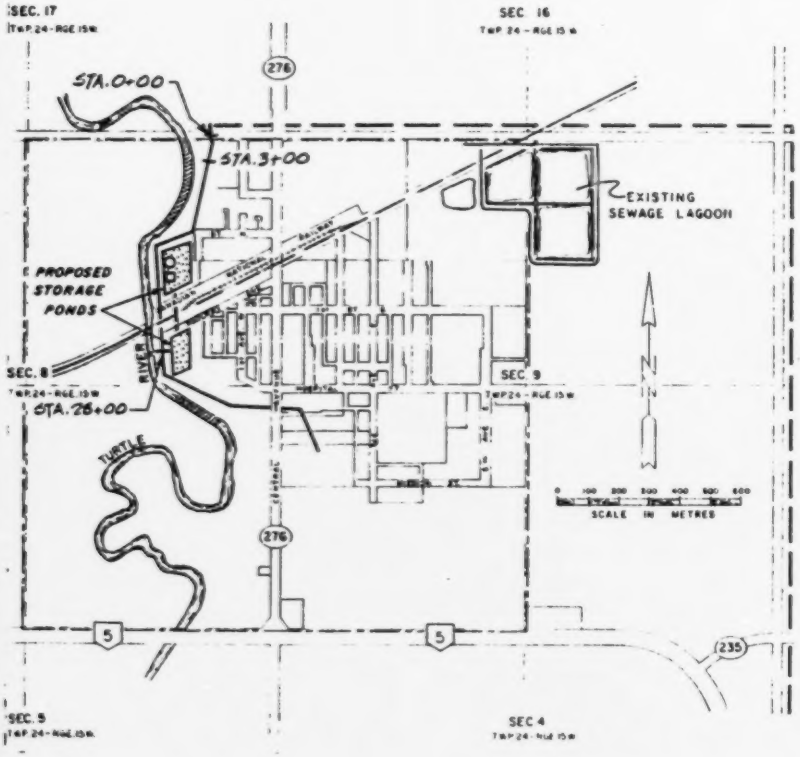
PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

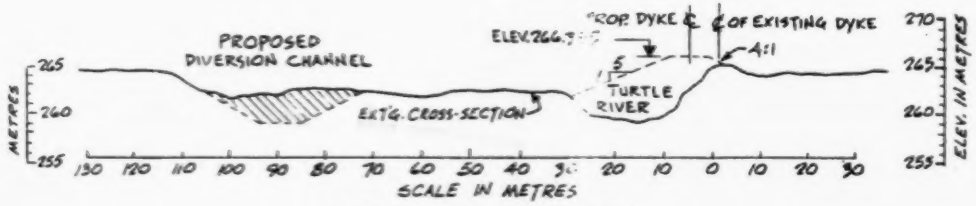
PREPARED | DRAWN FR | SUBMITTED | AGREED

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF ST. JEAN BAPTISTE

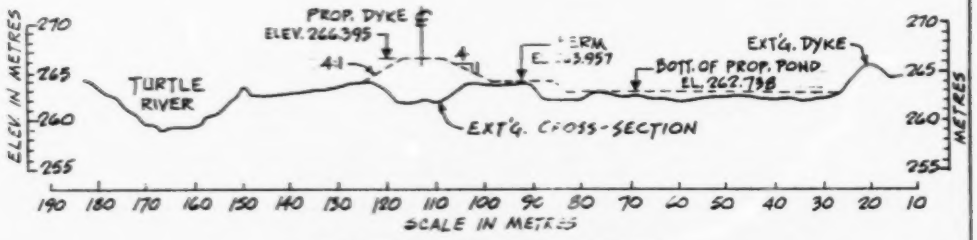
SCALE | DATE | SHEET | FILE NO.

VILLAGE OF
STE. ROSE DU LAC




TYPICAL CROSS-SECTION
(TAKEN AT STA. 3+00)




TYPICAL CROSS-SECTION
(TAKEN AT STA. 26+00)

## LEGEND

——— – LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM
– – – – – LOCATION OF PROPOSED NEW DYKE
□ – PROPOSED PUMPING STATION
○ – PROPOSED GRAVITY OUTLET CHAMBER

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

CANADA - MANITOBA FLOOD PROTECTION
PROJECTS AGREEMENT

LOCATION PLAN
AND
TYPICAL CROSS SECTIONS
FOR
VILLAGE OF STE. ROSE DU LAC